



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 016906-0183
#321

In re patent application of

Oliver BECK, et al.

Group Art Unit: 3743

Serial No. 09/121,702

Examiner: J. Ford

Filed: July 24, 1998

For: HEATING OR AIR CONDITIONING SYSTEM FOR A MOTOR VEHICLE

REPLY BRIEF

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Commissioner for Patents
Washington, D.C. 20231

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TECHNOLOGY CENTER R3700

Sir:

This Reply Brief is filed in response to the Examiner's Answer mailed on February 25, 2003, in connection with the above-identified application.

The Prior Art Rejections

Appellant certainly agrees with the point made on page 5 of the Examiner's Answer, namely, that the § 112 issue should be considered first. If the Board finds that there is no written description support for the claim recitation calling for independent volume control of air flow, then obviously there is no need to consider the prior art rejections with respect to any claim affected.

On the other hand, every applicant is entitled to have his or her claims examined in accordance with the very explicit procedural mandate set forth in M.P.E.P. § 2143.03, i.e., that all words of the claims must be taken into consideration when considering issues of patentability over the prior art, irrespective of issues regarding proper support for those words in the specification. It is important that an applicant be given the opportunity to understand the basis of each rejection and to have a complete opportunity to respond thereto. Appellants continue to believe that the Final Rejections on appeal here fail to comply with this requirement.

The importance of this fundamental tenet of PTO practice is made evident by the comments appearing on pages 21-24 of the Examiner's Answer, addressing the prior art

rejections applied to claims 1, 7, 9 and 11. In this very well developed field of art, it is usually relatively easy to find all of the "pieces" of any claimed invention in the prior art and to reconstruct the claimed invention by combining various references. It is all the more important, therefore, that the PTO not neglect to consider the "invention as a whole" when undertaking its patentability determination. The "invention as a whole" includes all of the beneficial effects that flow from the particular combination/arrangement of the elements recited in the claims, specifically including advantageous functions of the invention.

In the present application, one of the functions that is achieved by the invention is set forth in most of the claims, i.e., to be able to independently control the volume of air fed to each of the four separate zones. The PTO has utterly failed to consider this advantageous feature of the invention in the rejections on appeal, first by refusing to consider the claim recitation on the basis that it lacks support in the specification, and in the Examiner's Answer (page 20) disregarding the language as being functional ("whereby clause"). The advantages and benefits flowing from a claimed invention are essential to objectively determining whether the invention represents merely an assemblage of old elements or whether it contributes something that goes beyond the collective prior art. In the present case, the ability to independently control both the temperature and volume of air fed to four separate zones is not accomplished without significantly more complicated and space-consuming structure, such as separate air ducts to each zone with individual controls in each. Not only is it improper to refuse to consider this feature/advantage as part of the "invention as a whole," but Appellants contend that this is a significant advantage which demonstrates the non-obviousness of the claimed (novel) combination of structural elements.

Appellants make the following additional points in response to arguments raised in the Examiner's Answer:

1. Contrary to what is apparently suggested in the Answer (bridging pages 4-5), "compactness" is not necessarily a quantitatively-defined characteristic, i.e., it does not require definition in terms of dimensions. Compactness is often a matter of an economy of components and/or a unique and advantageous arrangement of components. That is certainly the case in conjunction with the refreshingly simple construction according to the invention, which nevertheless permits complex control of the four-zone heating and air-conditioning system.

2. In general, there is a suggestion in the Answer that Appellants have failed to establish the existence of any problems in the art or any advantages flowing from the invention because they have not undertaken extensive experimentation and presented detailed quantitative data. Such evidence is not required to demonstrate advantages of an invention in this field. In most instances, patents are granted when it can be shown, e.g., that a novel configuration provides a simple and/or elegant solution to a recognized problem or need in the art. That is certainly the case with the present invention. Furthermore, Appellants have submitted Declaration evidence of a person skilled in the art, not only acknowledging the stated problem(s) but also explaining that the factors which must be taken into consideration to solve those problems involve trade-offs in terms of overall size *vs.* number of zones *vs.* ability to achieve mixing to uniform exit air temperature. Appellants submit that this evidence has been improperly marginalized and not accorded the weight that it is due under the law.

3. The PTO urges that a reduction of gross vehicle weight equates with downsizing (page 19). That does not necessarily follow. For example, GVW reduction also involves improvements in materials. To be sure, some new, very small cars have emerged in recent years (which probably have no need for four-zone heating); however, it is believed to also be a matter of common knowledge that many car models have “grown” larger over the years, e.g., the Toyota Camry, the BMW 3-series, etc.

4. The comments on pages 20-21 of the Answer evidence a misunderstanding of several points made by Appellants. Appellants never contended that there “was no interest in downsizing automotive air conditioners” in the mid-nineteen nineties, nor disputed that invention is “spurred on or retarded by market conditions and market driven needs.” Appellants’ point was merely that there does not appear to be a legal precedent that supports a PTO denial of patentability based on the theory that the “motivation” to invent has increased over the period of time since the cited prior art references have appeared in the art. Moreover, Appellants dispute the factual correctness of the PTO’s premise.

The Section 112 Rejection

The following brief, but important, comments pertain to the rejection based on alleged lack of written description for the concept of individual controllability of the volume of air fed to each of the four separate zones.

1. The PTO has perhaps unconsciously recognized a key principle at the heart of this issue, i.e., that independent temperature control is achieved by varying the proportion of hot and cold air fed to each mixing chamber. Of course, this means by varying the relative volumes of hot and cold air. This is how so-called "air side" control systems operate. The relative control of air volume is, therefore, implicit in the disclosure, and the emphasis was placed on the "individualness" of control. If one can individually control the relative volumes, by definition one can control the resultant total volume.

2. The PTO errs in its premise (pages 9-10) that Appellants' description is deficient in that it does not describe in detail a control system that is capable of sophisticated control of the volume of air fed to each of the four zones. Sophisticated control is not what is claimed. The claims are broad to the ability to independently control the volume of air to each chamber (again, with emphasis on the "individually"), and this capability is inherent in the structure disclosed in Appellants' specification. The mere ability to separately "close off" one of the mixing chambers constitutes the ability to control the volume of air flow to the respective zone, and the application expressly teaches the ability to selectively close off both the warm air and the cold air ducts. (Page 6, lines 22-30)

3. With regard to the Rule 132 Declaration, Appellants wish to point out the following:

a. The quotations from the specification are interspersed in the narrative of the Declaration and are obviously partial quotes taken from the less than 8 page specification of this application (not some extraneous document).

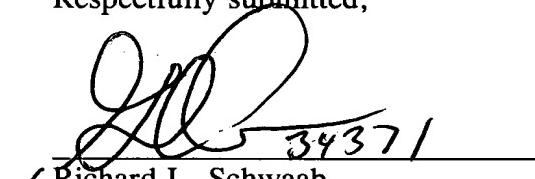
b. Appellants never argued that the feature of independent volume control was explicitly disclosed in the present application, but rather consistently took the position that this feature was inherent in the structure disclosed. Therefore, the quotes in the Declaration focus only on the structure of the claimed device. It is believed apparent from the marked-up version in the Answer that the functional discussions left out from the quotes do not in any way detract from Appellants' argument of inherency based on the disclosed structure.¹

¹ Appellants sincerely regret any impression that they were attempting to mislead the PTO by the nature of this presentation in the Declaration. Nothing could be further from the minds of the Appellants, the Declarant and their counsel. It never occurred to them that the Declaration would be read apart from the specification from which it selectively quoted.

c. Finally, the point and impact of the Declaration seem to have been lost amid the concerns over its form. The Declaration is presented as material evidence as to the way in which a person of ordinary skill in the art would have understood the disclosure in the specification. The conclusions and opinion set forth in the Declaration are made with respect *to the specification*, as they should be and as is pertinent to the issue raised by the rejection based on the written description requirement. Consequently, the Declaration is proper evidence and should be given the weight to which it is entitled in deciding this issue.

For the additional reasons set forth above, Appellants respectfully submit that the rejection based on § 112 as well as the rejections based on § 103 are legally and factually insufficient and should be reversed by the Board. Such action is respectfully solicited.

Respectfully submitted,



Richard L. Schwaab
Reg. No. 25,479

April 25, 2003

Date

FOLEY & LARDNER
Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

Telephone: (202) 672-5300
Facsimile: (202) 672-5399